FAA National Software Conference
Level of FAA Involvement

LEVEL OF FAA INVOLVMENT IN SOFTWARE PROJECTS

FAA SOFTWARE
STANDARDIZATION CONFERENCE

SEATTLE, WA

August 8-11, 2000

Jorge Castillo - FAA/ASW-110

Level of FAA Involvement (LOFI)

- Outlined in Notice N8110.xx, "Guidelines for Determining the Level of Federal Aviation Administration (FAA) Involvement in Software Projects"

- Identifies how much the FAA is involved in a software project

    – Number & type of reviews
    – Amount of data submittals
    – Amount of delegation

Jorge Castillo

FAA National Software Conference
Level of FAA Involvement

Notice 8110.xx Outline

- Section 1—Purpose
- Section 2—Distribution
- Section 3—Related Publications
- Section 4—Background
- Section 5—Discussion
- Section 6—Procedures
- Section 7—Special Considerations
- Section 8—Conclusion

Section 1—Purpose

- Provides guidelines for determining level of FAA involvement in software projects

- Applies to TC,STC, ASTC, ATC, and TSO projects that contain airborne software.

Jorge Castillo

FAA National Software Conference
Level of FAA Involvement

Section 4—Background

- DO-178B Sections 9.2 and 10.3 address certification liaison process
- Notice 8110.81 addresses software review process
- Notice 8110.xx address the following aspects of FAA's involvement:
  - when to be involved
  - extent of involvement
  - areas of involvement

Section 5—Discussion

- Three levels of involvement: High, Medium, and Low
- Use software level as a starting point (Table 1):

Level	LOFI
D	LOW
C	LOW or MEDIUM
B	MEDIUM or HIGH
A	MEDIUM or HIGH

Jorge Castillo

Section 5—Discussion (Cont'd)

- For ambiguities, use Table 2 of 8110.xx (See attachment # 8)

- Exception to Table 2 is projects with policy issues

Section 6—Procedures

- Perform LOFI assessment at beginning of project using the following steps:
  1. Look at Software Level
  2. If ambiguities exist, complete Table 2.

     Note: Table 2 may be completed by
     - ACO engineer familiar with the company, with input from ASI,
     - Designee,
     - Applicant, and/or
     - Software Developer

Jorge Castillo

FAA National Software Conference
Level of FAA Involvement

Section 6—Procedures (Cont'd)

3. Use Table 3 to determine LOFI

Total Score Results (TSR) (from Table 2)	Software Level A	Software Level B	Software Level C	Software Level D
TSR $\leq$ 80	HIGH	HIGH	MEDIUM	LOW
80 < TSR $\leq$ 130	HIGH	MEDIUM	MEDIUM	LOW
130 < TSR	MEDIUM	MEDIUM	LOW	LOW

4. Adjust LOFI, if policy issues exist:
- **•High for Level A or B**
- **•Med for Level C or D**

Slide
1B.9

Section 6—Procedures (Cont'd)

5. Document the LOFI assessment

- See Appendix B through D for examples of High, Medium, and Low

- See Appendix A for LOFI worksheet

- 6. Keep the worksheet up-to-date throughout the project

Jorge Castillo

FAA National Software Conference
Level of FAA Involvement

Section 7—Special Considerations

- Consider overall system criticality

- For TSO projects instead of DERs, evaluate their personnel responsible for software oversight

- Late submittals could result in intense involvement late in the program

- Mid-course corrections are encouraged

- LOFI reports may be used to assess FAA staffing needs

Examples

- Appendix A, B, C, and D contain examples

- Analyze Examples

Jorge Castillo

FAA National Software Conference
Level of FAA Involvement

Summary of 8110.xx

- Criteria and guidance are useful for prioritizing efforts given limited resources

- Key to be flexible when applying guidance

- There are no solid boundaries between levels of involvement

- Poor planning on the part of the applicant does not warrant panic on our part

Jorge Castillo